

Amendments to the Claims

1-8 Cancelled

9. (New) Poly(vinyl alcohol) copolymers on the basis of poly(vinyl ester) copolymers which are obtained by means of a method comprising the following steps:

- A) Radical solution or bulk polymerizing vinyl esters in the presence of a radical generator and in the presence of a radical scavenger.
- B) Adding a cross-linking polyalkenyl compound,
- C) optionally, processing and isolation of the poly(vinyl ester) copolymers formed,
- D) saponificating the poly(vinyl ester)/poly(vinyl ester-polyalkene) mixture prepared in step B) or of the poly(vinyl ester-polyalkene) copolymers isolated under step C) with a base to form the poly(vinyl alcohol)/poly(vinyl alcohol-polyalkene) mixtures or poly(vinyl alcohol-polyalkene) copolymers, respectively, and isolation of the products.

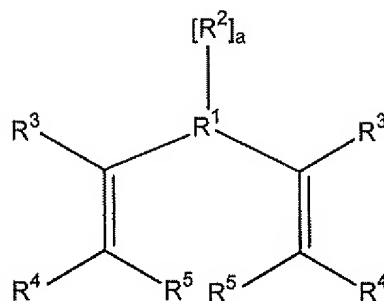
10. (New) Poly(vinyl alcohol) copolymers according to claim 9, wherein the radical generators in step A) are peroxide compounds.

11. (New) Poly(vinyl alcohol) copolymers according to claim 9, wherein the radical generators are used in amounts of 0.05 – 10 mmol per mole of vinyl acetate.

12. (New) Poly(vinyl alcohol) copolymers according to claim 9, wherein the radical scavengers in step A) are phosphoric acid esters.

13. (New) Poly(vinyl alcohol) copolymers according to claim 9, wherein the radical scavengers are used in amounts of 0.5 – 10 mol per mole of radical initiator.

14. (New) Poly(vinyl alcohol) copolymers according to claim 9, wherein the polyalkenyl compounds used in step B) are compounds of the formula I:



Formula I

where:

R^1 is a $C_6 - C_{20}$ -aryl group, a $C_5 - C_{20}$ -heteroaryl group, a $C_4 - C_{20}$ -cycloalkyl group, a $C_4 - C_{20}$ -heterocycloalkyl group or a $C_1 - C_{20}$ -alkyl group, in which one or several not directly neighboring C-atoms may be substituted by an element of the 5 or 6 group of elements and

R^2 is equal or different, and is hydrogen, oxygen, sulfur or a hydroxy group, a carbamoyl group, an amino group, a carboxy group, a $C_1 - C_{20}$ -alkylcarbonyl group, a $C_1 - C_{20}$ -alkyloxy group, a $C_6 - C_{20}$ -aryloxy group, an imino group, a $C_1 - C_{20}$ -alkylimino group, a $C_6 - C_{20}$ -alkylimino group, a cyano group, a $C_1 - C_{20}$ -alkyl group, a $C_6 - C_{20}$ -aryl group, a $C_5 - C_{20}$ -heteroaryl group, a $C_4 - C_{20}$ -cycloalkyl group, a $C_4 - C_{20}$ -heterocycloalkyl, a $C_7 - C_{20}$ -alkylaryl group, a $C_7 - C_{30}$ -arylalkyl group, a $C_2 - C_{20}$ -alkenyl group, a $C_2 - C_{20}$ - α -oxyalkenyl, a halogen containing $C_1 - C_{20}$ -alkyl group, a $C_6 - C_{20}$ -aryl group, a $C_7 - C_{20}$ -alkylaryl group, a $C_7 - C_{30}$ -arylalkyl group or a $C_2 - C_{20}$ -alkenyl group, and

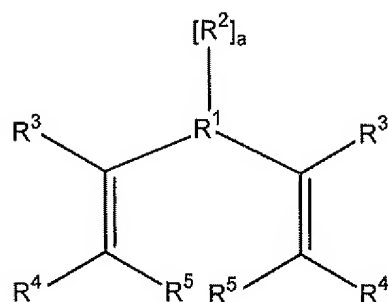
R^3 , R^4 and R^5 are equal or different, and is hydrogen or a $C_1 - C_{20}$ -carbon containing group, and

a is a natural integer from 0 to 40.

15. (New) Poly(vinyl alcohol) copolymers according to claim 14, wherein the R^1 is a $C_6 - C_{20}$ -aryl group, a $C_5 - C_{20}$ -heteroaryl group, a $C_4 - C_{20}$ -cycloalkyl group, a $C_4 - C_{20}$ -heterocycloalkyl group or a $C_1 - C_{20}$ -alkyl group, in which one or several not directly

neighboring C-atoms are optionally substituted by nitrogen, phosphorous, oxygen or sulfur.

16. (New) Poly(vinyl alcohol) copolymers according to claim 9, wherein the polyalkenyl compounds used in step B) are used in amounts of 0.0005 – 1 mol per mole of vinyl acetate.
17. (New) A process to produce Poly(vinyl alcohol) copolymers on the basis of poly(vinyl ester) copolymers which comprises the following steps:
 - A) Radical solution or bulk polymering of vinyl esters in the presence of a radical generator and in the presence of a radical scavenger.
 - B) Adding a cross-linking polyalkenyl compound,
 - C) Optionally, processing and isolation of the poly(vinyl ester) copolymers formed,
 - D) saponificating the poly(vinyl ester)/poly(vinyl ester-polyalkene) mixture prepared in step B) or of the poly(vinyl ester-polyalkene) copolymers isolated under step C) with a base to form the poly(vinyl alcohol)/poly(vinyl alcohol-polyalkene) mixtures or poly(vinyl alcohol-polyalkene) copolymers, respectively, and isolation of the products.
18. (New) The process according to claim 17, wherein the radical generators in step A) are peroxide compounds.
19. (New) The process according to claim 17, wherein the radical generators are used in amounts of 0.05 – 10 mmol per mole of vinyl acetate.
20. (New) The process according to claim 17, wherein the radical scavengers in step A) are phosphoric acid esters.
21. (New) The process according to claim 17, wherein the radical scavengers are used in amounts of 0.5 – 10 mol per mole of radical initiator.
22. (New) The process according to claim 17, wherein the polyalkenyl compounds used in step B) are compounds of the formula I:



Formula I

where:

R^1 is a $C_6 - C_{20}$ -aryl group, a $C_5 - C_{20}$ -heteroaryl group, a $C_4 - C_{20}$ -cycloalkyl group, a $C_4 - C_{20}$ -heterocycloalkyl group or a $C_1 - C_{20}$ -alkyl group, in which one or several not directly neighboring C-atoms may be substituted by an element of the 5 or 6 group of elements and

R^2 is equal or different, and is hydrogen, oxygen, sulfur or a hydroxy group, a carbamoyl group, an amino group, a carboxy group, a $C_1 - C_{20}$ -alkylcarbonyl group, a $C_1 - C_{20}$ -alkyloxy group, a $C_6 - C_{20}$ -aryloxy group, an imino group, a $C_1 - C_{20}$ -alkylimino group, a $C_6 - C_{20}$ -alkylimino group, a cyano group, a $C_1 - C_{20}$ -alkyl group, a $C_6 - C_{20}$ -aryl group, a $C_5 - C_{20}$ -heteroaryl group, a $C_4 - C_{20}$ -cycloalkyl group, a $C_4 - C_{20}$ -heterocycloalkyl, a $C_7 - C_{20}$ -alkylaryl group, a $C_7 - C_{30}$ -arylalkyl group, a $C_2 - C_{20}$ -alkenyl group, a $C_2 - C_{20}$ - α -oxyalkenyl, a halogen containing $C_1 - C_{20}$ -alkyl group, a $C_6 - C_{20}$ -aryl group, a $C_7 - C_{20}$ -alkylaryl group, a $C_7 - C_{30}$ -arylalkyl group or a $C_2 - C_{20}$ -alkenyl group, and

R^3 , R^4 and R^5 are equal or different, and is hydrogen or a $C_1 - C_{20}$ -carbon containing group, and

a is a natural integer from 0 to 40.

23. (New) The process according to claim 22, wherein the R^1 is a $C_6 - C_{20}$ -aryl group, a $C_5 - C_{20}$ -heteroaryl group, a $C_4 - C_{20}$ -cycloalkyl group, a $C_4 - C_{20}$ -heterocycloalkyl group or a $C_1 - C_{20}$ -alkyl group, in which one or several not directly

neighboring C-atoms are optionally substituted by nitrogen, phosphorous, oxygen or sulfur.

24. (New) The process according to claim 17, wherein the polyalkenyl compounds used in step B) are used in amounts of 0.0005 – 1 mol per mole of vinyl acetate.
25. (New) A product which comprises the poly(vinyl alcohol) copolymers according to claim 9.
26. (New) The product as claimed in claim 25, wherein the product is a painting agent, an adhesive, a finishing agent, a coating agent, an additives in papermaking, a lacquer component, a protective colloid, an emulsifier, a binding agent, a protective coating for films, a sizing agent, a metal protection coating, a water-soluble bag and a packaging film, an oil-resistant film, fat-resistant film, a fuel-resistant film, a hose, a seal, a shaving cream additive, a soap additive, a thickening agent in pharmaceutical and cosmetic preparations, a synthetic tear fluid, a water-soluble fiber or sponges, a cement additive, a hydrogel for water treatment or a poly(vinyl alcohol) processable in the melt.